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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,089	12/06/2000	Daniel J. Miller	MS1-630US	3095

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EXAMINER	
EL CHANTI, HUSSEIN A	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/732,089	MILLER ET AL.	
	Examiner	Art Unit	
	Hussein A El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-75* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4-6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to application filed on Dec. 6, 2000. Claims 1-75 are pending examination.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-17, 20, 21, 28, 33, 38, 40, 44, 50, 57, 59-65, 67, 69 and 70 are rejected under 35 U.S.C. 102(e) as being anticipated by Tucker et al., U.S. Patent No. 6,590,604 (referred to hereafter as Tucker).

As to claim 1, Tucker teaches an editing system comprising: a switch assembly comprising one or more software-implemented matrix switches, individual matrix switches comprising:

one or more input pins configured to receive a data stream (see col. 2 lines 18-25); and

one or more output pins configured to output a data stream (see col. 2 lines 18-25);

the one or more input pins being routable to the one or more output pins, the switch assembly being configured to process both compressed and uncompressed data streams to provide a compressed output data stream that represents a user-defined editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 2, Tucker teaches the editing system of claim 1, wherein the switch assembly comprises multiple switches (see col. 5 lines 23-47).

As to claim 3, Tucker teaches the editing system of claim 2, wherein one switch is configured to process compressed data streams (see col. 2 lines 23-35).

As to claim 4, Tucker teaches the editing system of claim 2, wherein one switch is configured to process uncompressed data streams (see col. 6 lines 58-67).

As to claim 5, Tucker teaches the editing system of claim 2, wherein one switch is configured to process compressed data streams, and one switch is configured to process uncompressed data streams (see col. 6 lines 58-67).

As to claim 6, Tucker teaches one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, provide the editing system of claim 1 (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 7, Tucker teaches the editing system of claim 1 configured as a multi-media editing system (see col. 5 lines 23-47).

As to claim 8, Tucker teaches an editing system comprising: a media processing object configured to: receive multiple data streams comprising compressed and uncompressed data streams; and process the one or more data streams to provide a compressed output data stream that represents a media project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 9, Tucker teaches the editing system of claim 8, wherein the media processing object comprises a software-implemented switch assembly (see col. 5 lines 23-47).

As to claim 10, Tucker teaches the editing system of claim 8, wherein the media processing object comprises a software-implemented switch assembly having multiple pins configured to receive or provide data streams (see col. 5 lines 23-47).

As to claim 11, Tucker teaches the editing system of claim 8, wherein the media processing object comprises multiple software-implemented switches each of which having one or more pins configured to receive or provide data streams (see col. 5 lines 23-47).

As to claim 12, Tucker teaches the editing system of claim 8, wherein the media project comprises a multi-media project (see col. 5 lines 23-47).

As to claim 13, Tucker teaches a multi-media editing system comprising:

a switch assembly comprising one or more software-implemented matrix switches, individual matrix switches comprising:

one or more input pins configured to receive a data stream; and one or more output pins configured to output a data stream;

the one or more input pins being routable to the one or more output pins, the switch assembly being configured to process both compressed and uncompressed data streams to provide a compressed output data stream that represents a user-defined multi-media editing project; and one or more data structures associated with the switch assembly and configured for use in programming the switch assembly to provide a routing scheme for routing input pins to output pins for a given multi-media editing project time line (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 14, Tucker teaches the multi-media editing system of claim 13, wherein the one or more data structures comprise one or more grid structures, individual grid structures being configured to contain data that defines an association between input and output pins for the project time line (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 15, Tucker teaches the multi-media editing system of claim 13, wherein the switch assembly comprises multiple switches (see col. 2 lines 18-45).

As to claim 16, Tucker teaches the multi-media editing system of claim 15, wherein the one or more data structures comprise a data structure associated with at least some of the multiple switches (see col. 2 lines 18-45).

As to claim 17, Tucker teaches the multi-media editing system of claim 16, wherein the data structures comprise grid structures that contain data that defines an association between input and output pins for the project time line (see col. 6 lines 58-col. 7 lines 10).

As to claim 20, Tucker teaches the multi-media editing system of claim 19, wherein the data structures comprise grid structures that contain data that defines an association between each switch's input and output pins for the project time line.

As to claim 21, Tucker teaches a multi-media editing system comprising:

a switch assembly comprising one or more non-hardware matrix switches, individual matrix switches comprising:

one or more input pins configured to receive a data stream; and

one or more output pins configured to output a data stream;

the one or more input pins being routable to the one or more output pins, the switch assembly being configured to process both compressed and uncompressed data streams to provide a compressed output data stream that represents a user-defined multi-media editing project.

As to claim 28, Tucker teaches an media processing system comprising: switch means for receiving compressed and uncompressed data streams associated with sources that are to be incorporated into a project and processing the compressed and uncompressed data streams to provide a single compressed output stream that

represents the project; and programming means associated with the switch means and configured to program the switch means to provide the single compressed output stream (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 33, Tucker teaches a multi-media editing system comprising:

a first software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the first matrix switch being configured to process one or more uncompressed data streams and output an uncompressed data stream;

a second software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the second matrix switch being configured to process one or more compressed data streams and output a compressed data stream; and

a third software-implemented matrix switch comprising multiple input pins and multiple output pins, the input pins being routable to one or more output pins, the third matrix switch being configured to receive an uncompressed data stream from the first switch and a compressed data stream from the second switch and process the received data streams to provide a single compressed output data stream that represents a user-defined multi-media editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 38, Tucker teaches a multi-media editing system comprising:

first software switch means for processing one or more uncompressed data streams to provide an uncompressed data stream, the switch means comprising at least one feedback loop that modifies a data stream that is output by the switch means and provides the modified data stream as an input to the switch means;

second software switch means for processing one or more compressed data streams to provide a compressed data stream; and

a third software switch means for receiving an uncompressed data stream from the first software switch means and a compressed data stream from the second software switch and processing the received data streams to provide a single compressed output data stream that represents a user-defined multi-media editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 40, Tucker teaches a multi-media editing system comprising:

a first software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the first matrix switch being configured to process one or more uncompressed data streams and output an uncompressed data stream;

a second software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the second matrix switch being configured to process one or more compressed data streams and output a compressed data stream;

a third software-implemented matrix switch comprising multiple input pins and multiple output pins, the input pins being routable to one or more output pins, the third matrix switch being configured to receive an uncompressed data stream from the first switch and a compressed data stream from the second switch and process the received data streams to provide a single compressed output data stream that represents a user-defined multi-media editing project; and

one or more data structures associated with at least some of the matrix switches and configured for use in programming the associated switches to provide a routing scheme for routing input pins to output pins (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 44, Tucker teaches a multi-media editing method comprising:

providing a switch assembly comprising one or more software-implemented matrix switches, individual matrix switches comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the switch assembly being configured to process both compressed and uncompressed data streams to provide a compressed output data stream that represents a user-defined multi-media editing project; and

programming the switch assembly using one or more data structures, said programming providing a routing scheme for routing input pins to output pins for a given time period (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 50, Tucker teaches the multi-media editing method of claim 44 further comprising: representing the editing project as a hierarchical tree structure; and processing the hierarchical tree structure to provide at least one grid structure containing data that defines an association between input pins, output pins and a time line defined by the editing project (see col. 9 lines 40-67).

As to claim 57, Tucker teaches one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

provide a switch assembly comprising multiple software-implemented matrix switches, individual matrix switches comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the switch assembly comprising: a first switch configured to process uncompressed data streams to provide an uncompressed output data stream;

a second switch configured to process compressed data streams to provide a compressed output data stream; and

a third switch configured to receive both the uncompressed and compressed output data streams and process the data streams to provide a compressed output data stream that represents a user-defined multi-media editing project; and

program the switch assembly by defining a first grid structure containing data that defines an association between the first switch's input pins, at least one output pin and a time line defined by the editing project, and defining a second grid structure containing

data that defines an association between the second switch's input pins, at least one output pin and the time line defined by the editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 59, Tucker teaches the computer-readable media of claim 58, wherein the instructions cause the computer to derive the second grid structure by: determining whether any entries in the second grid structure are associated with a data stream source that is not in a format that is the same as or compatible with a format associated with the compressed output data stream that represents a user-defined multi-media editing project; and removing any entry that is not in the same or compatible format (see col. 7 lines 27-40 and col. 8 lines 36-55)

As to claim 60, Tucker teaches the computer-readable media of claim 59, wherein said format is associated with a frame rate (see col. 7 lines 27-40 and col. 8 lines 36-55).

As to claim 61, Tucker teaches the computer-readable media of claim 59, wherein said format is associated with a data rate (see col. 7 lines 27-40 and col. 8 lines 36-55).

As to claim 62, Tucker teaches the computer-readable media of claim 58, wherein the instructions cause the computer to derive the second grid structure by: copying the first grid structure; evaluating the copied grid structure to ascertain entries associated with data source streams that are modified in some way; and removing any

grid entries associated with data source streams that are modified in some way (see col. 7 lines 27-40 and col. 8 lines 36-55).

As to claim 63, Tucker teaches a multi-media editing method comprising:

providing a first software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the first matrix switch being configured to process one or more uncompressed data streams and output an uncompressed data stream;

providing a second software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins, the second matrix switch being configured to process one or more compressed data streams and output a compressed data stream;

providing a third software-implemented matrix switch comprising multiple input pins and multiple output pins, the input pins being routable to one or more output pins; receiving, with the third matrix switch, an uncompressed data stream from the first switch and a compressed data stream from the second switch; and processing the received data streams with the third switch to provide a single compressed output data stream that represents a user-defined multi-media editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 64, Tucker teaches the multi-media editing method of claim 63, wherein said processing comprises: compressing the uncompressed data stream received from the first switch using a software-implemented compressor element

coupled with the third switch; and routing the compressed data stream that was compressed by the compressor element to an input pin of the third switch (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 65, Tucker teaches the multi-media editing method of claim 63 further comprising receiving with the third switch, when available, a data stream from the second switch and, when a data stream is unavailable from the second switch, seeking with the third switch, a data stream from the first switch (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 67, Tucker teaches one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

process at least one compressed data stream to provide an output compressed data stream that comprises a portion of a user-defined multi-media editing project that is associated with a data stream source;

process one or more uncompressed data streams to manipulate the one or more uncompressed data streams to provide an output uncompressed data stream that comprises a different portion of a user-defined multi-media editing project that is associated with one or more data stream sources;

compress the output uncompressed data stream; and

associate the output compressed data stream and the compressed output uncompressed data stream together to provide a compressed stream that represents a user-defined multi-media editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 69, Tucker teaches the computer-readable media of claim 67, wherein the instructions cause the computer to provide a software-implemented matrix switch that associates the data streams to provide the user-defined multi-media editing project, the software-implemented matrix switch being configured to receive the output compressed data stream when it is available, and seek the output uncompressed data stream when the output compressed data stream is unavailable (see col. 2 lines 18-45 and col. 5 lines 23-47).

As to claim 70, Tucker teaches one or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, cause the computer to:

receive and process one or more uncompressed data streams with a first software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins to output an uncompressed data stream;

receive and process one or more compressed data streams with a second software-implemented matrix switch comprising one or more input pins and one or more output pins, the one or more input pins being routable to the one or more output pins to output a compressed data stream;

receive and process the uncompressed data stream that is output by the first switch and the compressed data stream that is output by the second switch with a third software-implemented matrix switch comprising multiple input pins individual ones of which receive data streams, and one or more output pins individual ones of which provide data streams, the one or more input pins being routable to the one or more output pins to output, at one output pin, a compressed data stream that represents a user-defined multi-media editing project (see col. 2 lines 18-45 and col. 5 lines 23-47).

4. Claims 18, 19, 22-27, 29-32, 34-37, 39, 41-43, 45-49, 51-56, 58, 66, 68 and 71-75 do not teach or define any additional limitation over claims 1-17, 20, 21, 28, 33, 38, 40, 44, 50, 57, 59-65, 67, 69 and 70 and therefore are rejected for similar reasons.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Monitoring Of A Communication Link Utilizing History-Based Compression Algorithms by McBride et al., U.S. Patent No. 6,151,627.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A El-chanti whose telephone number is (703)305-4652. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703)308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

March 8, 2004

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